

# Pain Medication DNA



Pain Medication DNA identifies genetic variants that affect how an individual will respond to the analgesic effects of certain types of commonly prescribed pain medications.

Personalized medication management is essential in identifying the right drug and dosage for a patient. Many clinical factors influence and alter a patient's response to drugs, including age, weight, general health and personal genetics.

This clinically-actionable genetic test can assist the physician in identifying each patient's optimal treatment plan.

**Pain Medication DNA provides information that enables the physician to:**

- Prescribe a more appropriate medication and optimal dosage for a patient
- Avoid potentially severe and life-threatening side effects or a lack of drug efficacy
- Avoid the misinterpretation of drug-seeking behavior

<input checked="" type="checkbox"/> <b>CODEINE</b>	ULTRARAPID METABOLIZER EXTENSIVE METABOLIZER INTERMEDIATE METABOLIZER POOR METABOLIZER
Gene Tested - CYP2D6 Description AVOID DUE TO LACK OF ANALGESIC EFFECT	
<p>Avoid using codeine in this patient. The patient's genotype is associated with low or no CYP2D6 activity, very low systemic exposure to codeine's active metabolite, morphine, and little or no pain relief in response to standard doses of codeine. A satisfactory response to codeine may not be achieved, even with increased dosages. Consider alternative medications, such as non-opioid analgesics or opioids that are not metabolized by CYP2D6 (morphine, oxycodone, buprenorphine, fentanyl, methadone, hydromorphone, etc.). The use of alternative opioids that are metabolized by CYP2D6 such as tramadol, oxycodone or hydrocodone, should also be avoided.</p>	



**Pain Medication DNA | Enabling a faster time to an effective solution.**

For more information about Luminus Diagnostics testing platform  
 Contact us @ [www.luminusdiagnostics.com](http://www.luminusdiagnostics.com) 855-518-5542

# Pain Medication DNA

Pain Medication DNA analyzes a patient's unique genetic markers that influence the metabolism of nine commonly prescribed pain medications. This simple saliva-based test is supported by scientifically validated genetic testing technologies using clinically relevant markers and assays.

## Pharmacogenetic Phenotypes Tested

- Carisoprodol
- Celecoxib
- Codeine
- Fentanyl
- Hydrocodone
- Methadone
- Methotrexate toxicity
- Oxycodone
- Tramadol

A recent study evaluating the use of genotyping along with therapeutic drug treatment was presented at the American Academy of Pain Medicine (AAPM) 23<sup>rd</sup> Annual Meeting.\* This study demonstrated an increase in therapeutic efficacy and improved patient outcomes by reducing adverse drug reactions.

## A study presented at the American Academy of Pain Medicine's 23<sup>rd</sup> Annual Meeting discovered:

- 80% of patients reporting adverse drug responses were shown to be poor CYP2D6 metabolizers.
- Some methadone patients seeking higher doses were ultra metabolizers, demonstrating they were not exhibiting drug-seeking behavior.

Approximately half of all people have genetic variations that alter the function of CYP2D6, the enzyme responsible for much of drug metabolism in patients. Testing for these variations allows a physician to adjust patient dosing or select an alternative medication.



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